

## CLAIMS:

1. A method of manufacturing a magnetic tunnel junction device, in which a stack comprising two electrode layers, comprising a magnetic material, and a barrier layer extending in between, comprising a non-magnetic material, is formed, characterized in that one of the electrode layers is structured by means of etching, in which, during etching, a part of the relevant layer is made thinner by removing material until a rest layer remains, whereafter said rest layer is removed by means of physical etching, in which at least substantially particles have a motion energy which is between the sputtering threshold of the magnetic material of the rest layer and the sputtering threshold of the non-magnetic material of the barrier layer.
2. A method as claimed in claim 1, characterized in that particles are used which have a mass which is heavier than the mass of a metallic element of the magnetic material of the rest layer.
3. A method as claimed in claim 1, characterized in that the electrode layer to be structured is built up from, consecutively, a basic layer and a layer structure comprising at least a further layer for magnetic pinning of the basic layer.
4. A method as claimed in claim 3, characterized in that, prior to structuring the basic layer, the layer structure is chemically etched until the basic layer is reached.
5. A magnetic tunnel junction device obtained by means of the method as claimed in any one of the preceding claims.
6. A magnetic tunnel junction device as claimed in claim 5, in which the layer other than the structured electrode layer comprises a soft-magnetic layer which is usable as a flux guide.
7. A magnetic field sensor provided with the magnetic tunnel junction device as claimed in claim 5.

8. A magnetic field sensor provided with the magnetic tunnel junction device as claimed in claim 6 and provided with a magnetic yoke which is in magnetic contact with the soft-magnetic layer of the magnetic tunnel junction device.

5

9. A magnetic memory provided with the magnetic tunnel junction device as claimed in claim 5.

Ad  
A5

Ad  
B2

090878260